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## CHAPTER 8. SUPPORTABILITY ANALYSIS

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### 8-1. INTRODUCTION

a. A supportability analysis is conducted by the USAMMA Materiel Acquisition Directorate to describe the strategic roadmap of logistics supportability functions and the planning necessary to influence the system's design from conception to disposal. The support strategy summarizes the results of the logistics analysis, planning, and acquisition. All elements of logistics and related disciplines are included in the support strategy.

b. The support strategy addresses the responsibilities of the materiel developer and other organizations to maintain appropriate oversight of the fielded system. Oversight includes the identification of, and appropriate response to, performance, readiness, ownership cost, and support issues. Likewise, it includes an analysis of sustainment and technology insertion. Operational requirement floats (ORFs), contractor logistics support (CLS), forward-repair activities (FRAs), and original equipment manufacturer (OEM) maintenance are considered as part of the overall strategy.

### 8-2. SUPPORT STRATEGY

a. An acquisition strategy summary is included in the support strategy to identify the probable contract vehicle for procurement, basis of issue (BOI), estimated unit cost, total Army cost to the AMEDD BOI, and expected life of the item.

b. A clinical application summary is included for reference and to identify capabilities that are complimentary or overlapping.

c. The following logistics support elements are addressed:

- (1) Maintenance planning
- (2) Support and test equipment
- (3) Training and training support
- (4) Manpower and personnel
- (5) Supply support
- (6) Technical data
- (7) Computer resources support
- (8) Facilities
- (9) Packaging, handling, storage and transportation
- (10) Design interfaces

d. A materiel summary is included detailing cataloging, depot stock, and central management and procurement procedures.

### 8-3. LOGISTICS SUPPORT ELEMENTS

a. Maintenance Planning

(1) *Title 10 U.S.C. 2464*, a DOD policy, requires organic core maintenance capabilities. Such capabilities provide effective and timely response to surge demands,

ensure competitive capabilities, and sustain institutional expertise. Within statutory limitations, support concepts for new and modified systems shall maximize the use of contractor-provided, long-term, total lifecycle logistics support that combines depot-level maintenance for non-core-related workload along with wholesale and selected retail materiel management functions. Maximizing the use of contractor-provided support is not a mandate, merely a suggestion for consideration.

(2) Best value over the lifecycle of the system and use of existing contractor capabilities, particularly while the system is in production, shall be considered a key determinant in the development of the strategy. Long-term access to data is required for competitive sourcing of systems support throughout the lifecycle.

(3) The following items are addressed in the maintenance portion of the support strategy:

- (a) Actions and support necessary to ensure the system attains the specified system readiness objectives with the minimum lifecycle cost
- (b) Specific criteria for repair, including built-in test (BIT)
- (c) Inspection procedures and tools
- (d) 10/20 standards, including identification of specific maintenance tasks to be performed by the operator and maintainer
- (e) Maintenance Allocation Charts
- (f) TMDE requirements
- (g) Medical ORF recommendations
- (h) Repair and Spare Parts listing
- (i) Man-hour requirements

b. Support and Test Equipment

(1) All equipment (mobile or fixed) required to support the operation and maintenance (O&M) of a materiel system is evaluated. This includes associated multi-use support items, ground-handling and maintenance equipment, tools, meteorology and calibration equipment, and manual/automatic test equipment (ATE).

(2) The selection of support and test equipment is developed based on the size, weight and complexity of the equipment, the likelihood of need, and the ability of the user to utilize it effectively.

(3) A system support package (SSP) will be defined and evaluated during testing for large, complex systems. This package consists of spare and repair parts, manuals, training package, special tools and TMDE, and unique software. The SSP is flexible and is tailored to system-peculiar requirements.

c. Training and Training Support

(1) The support strategy shall address and identify training initiatives that enhance the user and maintainer capabilities, improve readiness, or reduce individual and collective training costs. Planned training shall maximize the use of new learning techniques, simulation technology, embedded training, and multimedia training to reduce the costs.

(2) The USAMMA works with the training community to develop options for individual, collective, and joint training for personnel who will operate, maintain,

support, and provide training for the system. These options may include factory, resident, or new equipment training.

d. Manpower and Personnel

(1) The support strategy addresses any changes to manpower requirements or military occupational specialties (MOS) for system operators, maintainers, or support personnel.

(2) Actions to combine, modify, or establish new military occupational specialties or additional skill indicators, or issues relating to hard-to-fill occupations are identified.

(3) Human factors engineering (HFE) and man-machine interfaces are considered for both operator and maintainer personnel.

e. Supply Support

(1) The support strategy identifies the source of supply support, including support management functions, that maximizes service to the user, while minimizing cost.

(2) Organic supply sources of support are selected when they offer the best value. Particular attention is given to prime vendor and electronic catalog contracts for consumables and parts support.

f. Technical Data

(1) Technical data, scientific or technical information recorded in any form or medium (such as manuals, drawings, and computer software documentation), necessary to operate and maintain the system are identified and procured if economically feasible.

(2) Manufacturer's literature available in both portable document format (PDF) and interactive electronic technical manuals (IETMs). These resources are also available for the maintainer and may be ordered from USAMMA's website at

**<http://www.usamma.army.mil/>**

g. Computer Resources Support

(1) Computer resources support involving facilities, hardware, software, documentation, manpower, and personnel needed to operate and support computer systems are documented in the support strategy. In addition, this analysis evaluates the BIT systems, all computer resources that interface with the test system and all off-equipment computer resources.

(2) Consideration of computer resources support ensures that computer resources are integrated, supportable, practical, and cost effective.

h. Facilities

(1) Impact on facilities is evaluated in the support strategy. These include permanent, semi-permanent, or temporary real property assets required to operate and support the materiel system, including conducting studies to define types of

facilities or facility improvements, locations, space needs, utilities, environmental requirements, real estate requirements, and equipment. Most medical equipment does not require changes to any facility.

(2) If new facilities are required or require modifications, military construction (MILCON) may be budgeted and coordinated dependent upon the size and cost and other system factors identified.

i. Packaging, Handling, Storage and Transportation

(1) Identification of the resources, processes, procedures, design considerations, and methods to ensure all system, equipment, and support items are preserved, packaged, handled, and transported are documented. This includes environmental considerations, equipment preservation requirements for short- and long-term storage, and transportability.

(2) The support strategy addresses the ability of the system to satisfy the rigors of transportation and storage utilizing testing. Adherence to applicable Military Standards (MIL-STDs), Army Regulations (ARs), and the American Society of Testing and Materials (ASTM) is documented. The following items are considered:

- (a) System constraints (design specifications, item configuration, safety precautions)
- (b) Geographic and environmental restrictions
- (c) Special handling equipment and procedures
- (d) Impact on spare or repair parts storage requirements
- (e) Environmental impacts and constraints

j. Design Interfaces

Design interface is considered within the scope of operational readiness and support resource requirements. Consideration is given to standardization, interoperability, safety, security, environmental and hazardous materials, and legal requirements.